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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,627	11/17/2000	Masakazu Hattori	04329.2460	8897
22852	7590	07/14/2005		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413				
			EXAMINER LE, MIRANDA	
			ART UNIT 2167	PAPER NUMBER

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/714,627

Applicant(s)

HATTORI ET AL.

Examiner

Miranda Le

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10, 11, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 11, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/16/2005 has been entered.
2. This communication is responsive to Amendment filed 05/16/2005.

Claims 1-7, 10-11, 15-16 are pending in this application. Claims 1, 15, 16 are independent claims. In the Amendment, claims 1, 15, 16 have been amended. This action is made non-Final.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-7, 10, 11, 15, 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakatsuyama et al. (US Patent No. 5,875,441), in view of Tada et al. (US Patent No. 6,496,8120).

**As per claims 1, 15, 16,** Nakatsuyama teaches a structured document search method for searching a structured document database, comprising:

accepting a search request (i.e. Fig. 7 shows a query represented by a directed graph, col. 11, line 54) in the form of a logical structured document (col. 8, lines 3-60, col. 11, line 54 to col. 12, line 13);

analyzing the accepted search request (i.e. the query evaluating unit, col. 8, line 44) to generate a search graph including graph nodes based on the logical structure (i.e. When the query shown in FIG. 7 is inputted, and the document type shown in FIG. 13 is selected in step S13 shown in FIG. 5, col. 12, lines 1-3) , wherein the graph nodes represent one of a hierarchical-level relationship (i.e. Fig. 15 shows the document type), sibling relationship, and ancestor-posterity relationship (col. 3, lines 43-65, col. 8, lines 3-60 , col. 11, line 54 to col. 12, line 13);

generating a search plan for a hierarchical structure (i.e. selecting process routine, col. 9, line 37) possessed by a searched document, in which a search processing procedure for said structured document database is developed from said search graph (i.e. When the query evaluating unit 18 receives the query and a list of the document types, the query evaluating unit 18 searches only the documents that are created according to the received document types, and retrieves documents which satisfy the query, col.8, lines 34-41), said generating the search plan including:

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inputted thereto, col. 9, lines 16-18), using a plan generation rule base including a plurality of plan generation rules, the plurality of plan generation rules each including rule application conditions (a condition regarding elements of a document, col. 9, lines 18-19), costs (retrieving time is reduced, col. 5, lines 51-58) and search processing procedures (col. 9, lines 3 to col. 10, line 67, col. 5, lines 25-58, col. 8, lines 3-65);

executing a search processing procedure of the applied plan generation rule (i.e. selecting a process routine, col. 9, lines 30-64).

repeating the applying and the executing thereby to complete said search plan (i.e. the process described above retrieves all document types to be processed, i.e., all document types including part that matches the structure of the query, col. 9, lines 33-36); and

acquiring search results satisfying said search request by executing said search plan (col. 9, line 30 to col. 10, line 36).

Nakatsuyama does not explicitly teach a variable to be embodied is inserted between the graph nodes, executing a search processing procedure of the applied plan generation rule for materializing said variable. However, Tada teaches this limitation at Fig. 3, col. 4, lines 1-31.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Nakatsuyama with the teachings of Tada to include “a variable to be embodied is inserted between the graph nodes, executing a search processing procedure of the applied plan generation rule for materializing said variable” in order to calculate a matching degree for the search conditions from the occurrence frequency and the occurrence position of the search term and the length of the element within the search range.

**As per claim 2**, Tada teaches comprising utilizing index information relating to actual data in said structured document database for said materializing in Fig. 6.

**As per claim 3**, Nakatsuyama teaches selecting, from applicable plan generation rules, a plan generation rule a cost of which is less than said applicable plan generation rules (col. 12, lines 1-48).

**As per claim 4**, Nakatsuyama teaches the search plan is executed after the completion of the generation of said search plan (col. 9, lines 28-64).

**As per claim 5**, Nakatsuyama teaches generation and execution of said search plan are performed alternately (col. 9, lines 28-64).

**As per claim 6**, Nakatsuyama teaches said structured document database includes a hierarchical structure concerning element name and element value in Fig. 13.

said search request includes search conditions concerning said element name and said element value in Fig. 13; and

Tada teaches said index information includes at least one of data creation index including information for specifying said element value creation position in said structured document database and element name occurrence index including information for specifying said element name creation position in said structured document database (Fig. 3, col. 4, lines 1-31).

As per claim 7, Tada teaches said element name occurrence index includes information indicating said element name creation position by a parent element one rank higher in hierarchy of the partial structure where said element name is generated (Fig. 3, col. 4, lines 1-31).

As per claim 10, Nakatsuyama teaches said plan generation rule can be arbitrarily registered or deleted in said plan generation rule base (col. 9, lines 3 to col. 10, line 67).

As per claim 11, Nakatsuyama teaches said search graph is generated based on the syntax analysis results of the description of said search request, in the generation of said search graph (col. 9, lines 3 to col. 10, line 67).

### *Response to Arguments*

Applicant's arguments regarding Tateishi does not teach the amended claims 1, 15, 16 have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

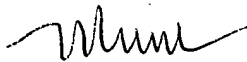
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (571) 272-4112. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (571) 272-4107. The fax number to this Art Unit is 571-273-8300.

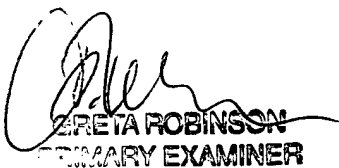
Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Miranda Le  
July 8, 2005



ZRETA ROBINSON  
PRIMARY EXAMINER